System Configuration Team (SCT)
Reasonable & Prudent Measure #26
Meeting Notes
February 12, 1997

Greetings and Introductions.

The February 12 meeting of the System Configuration Team, held at the National Marine Fisheries Service's offices in Portland, Oregon, was co-chaired by Jim Ruff of the Northwest Power Planning Council staff and Bill Hevlin of NMFS. The agenda for the February 12 meeting and a list of attendees is attached as Enclosures A and B. The following is a summary (not a verbatim transcript) of items discussed at the meeting, together with actions taken on those items. Please note that some enclosures referenced may be too lengthy to routinely include with the meeting notes; copies of all enclosures referred to in the minutes are available upon request from Kathy Mott of NMFS at 503/230-5420.

I. Ice Harbor Turbine Rehabilitation Report.

COE's Brayton Willis provide a detailed briefing on the status of the Ice Harbor Major Rehab Report. As some of you are aware, he began, the Corps' Major Rehab program was set up to capture Construction General funding for rehab. Headquarters justifies funding on a project-by-project basis, based primarily on cost-benefit analysis. For each proposed project, we are required to produce a detailed report, covering economics, engineering, environmental benefits, schedule and recommended actions, Willis explained. He took the SCT through a series of overheads, which are reproduced in Enclosure C.

We started to prepare the Ice Harbor turbine rehab report in September 1995, he continued. The draft report is finished, and is now undergoing internal review and independent technical analysis. We have also developed an NED, or National Economic Development plan, Willis said. In preparing an NED plan, the goal is to identify the alternative that presents the greatest net benefit. When we began this process, there were 60 different alternatives -- 60 different potential fixes for the problems at Ice Harbor -- on the table. That list has now been reduced to a

single preferred alternative, which includes:

? Units 1-3:
-- 11% uprate rewind
-- new transformers
-- new conventional blades
-- electronic front-end governor retrofits for turbines
-- solid-state exciters

? Units 4-6
-- rewind
-- solid-state exciters

In response to a question from Steve Pettit of IDFG, BPA's Phil Thor explained that an "11% uprate rewind" is a rewind that will increase the generation capacity of turbine units 1-3 by 11%. How are the biological impacts of this project factored into your analysis? asked Rod Woodin of WDFW. You can have a plan that looks great economically, but if it's in conflict with meeting our ESA goals, how do you resolve that? We're in the process of preparing a biological benefits analysis, Willis replied. As far as I know, no conflicts have been identified.

Moving on to schedule, Willis said the Ice Harbor rehab report will be submitted to COE Headquarters on March 31, and to ORB and Congress by the fourth quarter of FY'97. Bear in mind that Ice Harbor is in competition with all of the Corps' other major rehab projects all over the country, he said -- locks, powerhouses etc -- as well as other Construction General projects nationwide. However, in looking at the benefit/cost ratio for all of the powerhouse projects under consideration at the moment, our closest competitor is a powerhouse in Arkansas, with a b/c ratio of 1.08, while the b/c ratio for the recommended plan at Ice Harbor is 4.2+. In other words, said Willis, our chances for funding are pretty good.

The project, including engineering, design and construction for all six units, is expected to cost about $60 million over six years -- one year for each turbine unit, Willis continued. We have spaced things that way to avoid having two units down at the same time. The plan also calls for doing this work outside the high-flow period, and having each rehabilitated unit rewound and operational by April 15 of the appropriate year. One hitch, however: due to the length of time required for model development, the first turbine rewind will probably take 11

months, rather than nine months, to complete, which will impinge on the fish migration period somewhat.

One question that came up at the last FFDRWG meeting, said Willis: how does this project fit in with the '99 decision? The region could decide to draw down Ice Harbor, they could decide to breach it, or they could decide to operate the powerhouse for the next 40-50 years. This is primarily a planning effort, if the latter pathway is the one adopted by the region. It's a big issue, said Thor -- how far out does the benefit period for this project really extend? The basic idea is to be prepared, said COE's Witt Anderson -- if the region does not choose the drawdown alternative in 1999, we'll need an efficient and reliable powerhouse at Ice Harbor.

In response to another question, Willis said actual work on the first unit will begin in 1999, which means the Ice Harbor rehabilitation project probably will not be completed until 2006.

The discussion moved on to the type of turbine blades to be installed in the course of the rehab project. Because of concerns about higher cost and reduced operating range, minimum gap runners were not the alternative chosen at Ice Harbor, although it was agreed that, if the region decides that minimum gap runners are necessary for that project, the Corps is willing to reconsider its decision not to install them. Still, for the time being, primarily because of the difference between what the minimum-gap runners produce at 1% peak efficiency and what conventional blades produce at 1% peak efficiency, minimum-gap runners have been written out of the equation, said Willis. He added that his preference would be to add a contingency line-item of 5%-6% of the total budget to his cost estimate, to keep the door open and allow for the incorporation of any technology advancements made between now and FY'99 that might do more for power and fish -- a technology advancements allowance, in other words.

The SCT spent a few minutes discussing the case for minimum-gap runners at Ice Harbor, ultimately concluding that the jury is still out on their efficacy in enhancing survival of fish passing through the turbines. What we really need is a test of this new minimum-gap runner, said Ruff. It was observed that Grant County PUD is planning such a test at Wanapum Dam, beginning in 1998.

Didn't the balloon-tag researchers note some differences in injury type and rate last year? asked Hevlin. Yes, replied Steve Hayes; however, the bottom line is, the conventional units

performed remarkably well in field tests. If we would have seen these levels of survival and low injury rates two years earlier, we never would have done anything different, Hayes said.

Turbine design is a tradeoff, said Rod Wittinger -- you have to give something to get something. You can either design for maximum efficiency, or you can design for broad operating range. The present conventional wisdom is that high efficiencies are good for fish, and it seems to me that's what we want to design for, until something different is proven.

The literature seems to indicate that the more you run units outside peak efficiency, the more wear and tear they incur, said Bob Heinith of CRITFC. Did you factor O&M into your economic analysis? It was considered, but O&M is only a small piece of the puzzle, in the overall context of this study, said Wittinger. My understanding is that this powerhouse has been peaked for many years, Heinith said, and that's why these units are so worn down. If they had been operated within their peak efficiency, they may not have needed new runners.

What's the process for review and comment on this report? asked Hevlin. The report will be finished once Headquarters puts their stamp on it in June, Willis replied. It would be helpful if the agencies could review the report in draft form, said Steve Rainey of NMFS -- there are some fairly serious concerns about some of the curves shown in [Enclosure C], and the validity of some of the assumptions the Corps is using. If we have to wait until Division and Headquarters have signed off on the report, it's pretty late in the game to provide constructive input.

I understand your concerns, said Willis, but this is a fast-moving train. We'll talk internally, and see what can be done about opening the report up for comment prior to sending it to Headquarters.

Will the operating discharge through each unit change with the rehab? asked Rod Woodin of WDFW. If it's going to change, how will that affect the performance of the VBS system? It will change, Wittinger replied. How that will affect VBS performance, we don't know yet. Also, will the 11% uprate increase hydraulic capacity for Units 1, 2 and 3? asked Rainey. Potentially yes, Wittinger replied. More flow through the unit means more flow and higher velocities through the screen systems and potentially up into the gatewells, observed one meeting participant.

I'm concerned about the possibility that increased hydraulic capacity through those three units is going to increase

impingement and injury to fish, Woodin said. It sounds like there is a pretty strong desire for agency review of this report, said Willis. My deadline to deliver it to HQ is March 31. Can we schedule an adequate review and still meet that deadline? Willis asked. Or do we need to think about the possibility of a concurrent regional and Headquarters review? After some minutes of further discussion, Witt Anderson said the Corps would discuss the regional review question internally, and develop a plan that will allow the Corps to collect and incorporate the region's views before the report goes to HQ.

In response to a question, Willis said the funds for the rehab study are coming from the Corps O & M budget. The rehab project itself will be paid for out of the Corps Construction General fund, which is outside the fish cap. These are not fish costs -- they're power O & M.

The discussion turned briefly to the Bonneville minimum-gap runner development, and its relevance to what is being developed for Ice Harbor. The reason I'd like to know about this, said Ruff, is that we're talking about FY'98 priorities within SCT, and what we really need to know is, are these minimum-gap runners truly fish-friendly, or even fish-neutral? We won't know that until we test them, and we can't test them until Bonneville's minimum-gap runners are installed.

Wittinger spent a few minutes going through a series of overheads, explaining the 1% operating limit and the some of the technical research that has been done to study the survival of fish through turbines under various turbine efficiencies. Most of Wittinger's data focused on the Big Cliff project, run on Caplan turbines half the size and running at twice the speed of anything on the FCRPS. After reviewing the Big Cliff turbine performance data, he said, somewhere along the line, the decision was made to select a turbine operating range of roughly 1%. That's been a limit that has been applied for a number of years now.

Wittinger described the various technical inputs used to develop turbine performance curves -- head, blade angles, gate angles etc. It's an extremely complex process, he said. At Bonneville, under the research program, when we overlayed the 1% operating limit, the economics of installing minimum-gap runners were a push, so we went ahead and procured those machines for installation. At The Dalles and Ice Harbor, however, the economics didn't pencil out in such a way as to allow us to select the minimum-gap runners as our preferred alternative, Wittinger explained.

How much of a difference in gap width is there between the minimum-gap and conventional units? asked Woodin. First of all, there are gaps in two places -- on the hub, and on the exterior, Wittinger explained. With conventional units, the openings at the exterior vary depending on blade position, to a maximum of 8" to12" at the exterior and 6" to 8" at the hub. At the center line of the blade, we're talking about a gap of perhaps 3/8". The minimum-gap technology closes all of those gaps to a maximum of about 3/8", over the full blade rotation.

One observation, said Steve Hayes -- more recent tests at Wanapum, Rocky Reach and other projects have shown that steeper blade angles and wider wicket gate settings produce higher fish survival than flatter-blade, low-power-output settings. Basically, at the steeper settings, there is less turbulence and less chance of a fish striking a piece of metal somewhere. We may not be doing the fish any favors by designing turbine blades whose peak efficiency occurs at the flattest blade settings, Hayes said. Bear in mind that the Big Cliff tests were done in 1964, when they had no idea what was killing fish. That's another reason we need to test these units -- we may be designing the wrong thing.

I should add that we have expanded the number of tests we're planning to do at Bonneville in 1998, said COE's John Ferguson. By the summer of 1998, we'll be able to do a minimum-gap runner test at Bonneville. Over a range of efficiencies? asked Ruff. We're going to look at peak, low and high, Ferguson said. We'll use a balloon-tag study to give us survival information.

II. 1997 Monitoring and Study Plan of Dissolved Gas Generation at Grand Coulee.

Kathy Frizell of the Bureau of Reclamation's Denver technical service center, who will be leading the dissolved gas monitoring and study at Grand Coulee, provided a briefing on Reclamation's plan to evaluate different discharge configurations at that project this spring, to gauge the effect of different operating strategies on TDG downstream. Frizell went through a series of overheads, which are reproduced in Enclosure D (see Enclosure for details on Grand Coulee hydraulic structure, study background, objectives, and planned test specifics).

In response to a question from Heinith, Frizell said the lowest Grand Coulee draft tube, at elevation 935.76, was decommissioned long ago. However, there have been some preliminary discussions about re-opening that draft tube; it discharges underwater, which

would be beneficial from a TDG standpoint. However, there are some concerns serious about the hydraulic effects of this sub-surface discharge on the physical structures downstream from the dam.

The nine planned tests will be conducted this spring, in conjunction with involuntary spill releases, Frizell explained. We're thinking April and May as the most likely time-frame, she said. Based on 1996 data, TDG levels in Grand Coulee forebay are expected to be in the 115%-120% range during the test period; TDG levels at the outlets peaked at 135% in 1996.

The SCT spent a few minutes discussing the Grand Coulee test; Hevlin requested that, once the study plan is completely fleshed out, that it be distributed to SCT, the Mid-Columbia Coordinating Committee, the Technical Management Team and the Dissolved Gas Team for comment. And that's what we're here for -- we want to give everyone a chance to comment on the plan, Frizell replied. The bottom line is, we're going to have to release this water -- we might as well learn as much as we can in the process. Ultimately, the SCT agreed that this test is very important to the region, and recommended that BOR do it in the most fish-friendly way possible, doing everything they can to get the test program up and running as early in the migration season as possible, when there are fewer fish in the river.

III. 1997 Monitoring Plan for Dissolved Gas at Chief Joseph.

COE has made the decision to ask Seattle District to monitor TDG in the Chief Joseph tailrace in 1997, said Witt Anderson. We'll see what the 1997 data tell us, then make a decision about what to do in future years, he said.

IV. Discussion of FY'98 Issues for IT.

We worked up a draft FY'98 issues summary, which was distributed at the most recent IT meeting, said Hevlin. I wanted to discuss that summary today, with an eye toward refining it for further discussion at tomorrow's IT meeting. The original assignment from IT was two-fold -- first, to identify issues for FY'98, and second, to identify a plan through which SCT will attempt to resolve those issues, in order to develop a final SCT recommendation on an FY'98 budget.

We've completed the first part of that assignment with the

development of this list, said Hevlin, distributing Enclosure E ("Draft Summary of the Major Issues Identified by the SCT in the COE's FY'98 Budget"). The document identifies eight issues, and also includes a spreadsheet, summarizing the cost and schedule of those issues.

Another thing I wanted to discuss today is, which of these issues is time-sensitive? said Ruff. In other words, which of these do we really need to move forward on as quickly as possible? It would be nice if we could reach agreement on that today. How does identifying those time-sensitive issues help? asked Ron Boyce. It will allow us to tell which issues need to be decided immediately, and which issues SCT will have more time to work on, Hevlin replied. From the Corps' perspective, if, for example, we expect to be able to implement extended-length screens at John Day in 1998, we have to make a decision about whether or not to advertise the contract no later than July 1997, said Anderson. We need to get regional decision on that item, whatever that decision may be. We may not end up with consensus; in that case, NMFS may have to make a call under the Bi-Op, and the Corps, as the implementer, may have to make its call.

What we're trying to do is work backward from the contract advertisement dates for each of these projects, and factor in the time IT or EC will need to reach a decision, Hevlin said. In the case of the John Day E-screen decision, we'll probably need to bump that to the IT no later than May 1 if SCT can't reach consensus. In that case, let's spend some time talking about a process by which the SCT can reach a decision on these issues, suggested Boyce. Then we can identify the time-frame in which we'll need to get unresolved issues to IT.

The group spent a few minutes deciding how best to attack the issues list and refine it for presentation to IT, particularly Issue 1, the CRITFC "forest" issue. Ultimately, it was agreed to go through the list point by point, identifying the most time-sensitive issues. We will then discuss those time-sensitive issues within the SCT; if we can't reach agreement on whether or not to move forward, we'll elevate them to IT, Hevlin said. That's part one of this task. The other part is the identification of options to resolve each of these issues within SCT.

The outcome of this point-by-point discussion is summarized as follows:

ISSUE 1: The Completion, Maintenance and Improvements to Intake Screen Bypass Systems at the Lower Snake and McNary Dams.

Time-Sensitive Components:

-- Lower Granite Extended-Length Screens
-- Little Goose Extended-Length Screens
-- Ice Harbor Juvenile Bypass Facility
-- McNary Extended-Length Screens

Some minutes of further discussion revealed the fact that, while these are time-sensitive projects, none of these contracts will be advertised within the next few months. In terms of options for how to proceed from here with all of the items under Issue 1, Hevlin said NMFS's preferred option would be to complete the ongoing projects, and to continue cost-benefit discussions on the new projects. The gate-raise modifications at Lower Monumental and McNary will likely be deferred to FY'99; the McNary screen maintenance facility is also on hold, while the Corps explores the possibility of hiring a private screen-maintenance contractor.

So we need to discuss the options for the four projects listed above, said Hevlin. One option is to go ahead and complete them, and retain them in the FY'98 budget. We also need to know whether, if we decide not to complete them, that will render these facilities inoperable or unsafe, said Ruff. It may be that we can complete some pieces of these projects, to take care of those concerns, but not do others, and save some money. So we need to break the costs down further, if we're going to effectively address CRITFC's opportunity cost issue, said Anderson.

Ultimately, Hevlin summarized the outcome of this discussion as follows: since none of these projects is critically time-sensitive, some SCT members would like more detail on how the $4 million budgeted for these projects in FY'98 will be spent.

One fundamental question for Keith and Bob, said Anderson: do you want to operate the screens or not? All we're talking about here is the last little bit of stuff to make these systems operational. I would say that we should go ahead and operate what we have in place, said Heinith -- we have O&M funding available, so we might as well use it. If putting a moratorium on these expenditures is going to cause more harm, then I doubt we would oppose spending this money, agreed Kutchins. We're just interested in getting the forest issue addressed.

In response to a question from Boyce, Mike Mason of COE said the extended-length screens at
Lower Granite, Little Goose and McNary are all installed and

operating this year. And they'll operate this year, whether we spend this money or not? asked Boyce. Other than potential design deficiencies that may need to be corrected, and some work that needs to be done for project personnel safety, yes, said Mason. The spreadsheet describes exactly what work will be done in FY'98. If what we're talking about is cutting off funds to ensure that the screens perform and are maintained satisfactorily, that puts this discussion in a different light for me, said Boyce.

We just need the best possible information about what, exactly, this $4 million is going to be used for, said Heinith. If we're talking about a small amount to keep the screens operating during the spring migration period, maybe that's not a bad idea. Ultimately, it was agreed that the Corps will provide more detailed information to answer the question of whether this money is necessary to safely operate the screens, for both fish and project personnel, in 1997. Also, if these funds are not spent, what are the implications of that decision? said Boyce.

ISSUE 2: The Continuation of the Surface Bypass Program at Lower Granite Dam.

This is another time-sensitive project, said Anderson -- we would like to let the contract with the goal of getting this prototype constructed for 1998, which means we need to advertise the contract by the August 1997. A WES modeling session on the Lower Granite surface bypass prototype is scheduled for early March; that means it should be possible to get an update at the March SCT meeting. I think this project is critical -- if it's successful, it's an effective means of reducing turbine mortality and project delay, said Boyce. I think it's worth pursuing. We'll put it on the agenda for the March meeting, said Hevlin.

It's important that we get good representation on the WES trip, said Mason -- the Corps would even be willing to pay some travel costs to ensure that all the entities that are important to making this decision have a chance to attend that session. We do ask something in return for that financial support, however, he said -- something on paper expressing their opinion of what they thought they saw, and what their recommendation is on the project.

Hevlin requested that Heinith develop a short paper explaining why CRITFC does not support continued funding for this project in FY'98, to be presented at the March SCT meeting -- biological considerations, pros, cons and tradeoffs. We want to hear your position, and the rationale for that, Hevlin said -- NMFS will do

the same on the other side of the coin, and explain why we support the project. We'll discuss both of those papers, as well as the results of the WES trip, at the March SCT meeting.

ISSUE 3: Completion of the John Day Smolt Monitoring Facility.

This issue, which is not time-sensitive, was not substantively discussed at the meeting.

ISSUE 4: John Day Extended-Length Screens Implementation.

This a time-sensitive issue, with the contract to be advertised in August and awarded in October. We need to make a decision on this by June 15, said Anderson. If we allow enough time for discussion by the Executive Committee, that means the SCT needs to try to resolve it prior to the May IT meeting, said Hevlin. The project manager is putting together a two-page paper on how this fits in with the other decisions at John Day, Anderson said -- drawdown, surface collection, longterm spill etc. Why doesn't the Corps put together a presentation at the March SCT meeting, and at the same time, perhaps CRITFC could review the biological effects based on last year's testing. Heinith also agreed to develop a short paper laying out the rationale behind CRITFC's decision not to support John Day extended-length screen implementation. We can also discuss what might be gained or lost if we delay implementation for a year or two, Hevlin suggested.

ISSUE 5: The Dalles Spillway and Sluiceway Survival Study.

Heinith said he intends to raise the issue of FY'97 funding for this project at tomorrow's IT meeting -- CRITFC's feeling is that this question has already been answered with last year's survival data, and this money could be better spent on adult passage projects, he said. No substantive discussion of FY'98 funding for this project took place at the meeting.

ISSUE 6: Bonneville PH2 DSM, Monitoring and Outfall Relocation and PH1 DSM, Monitoring and Outfall Relocation.

The critical date for PH2 work is July, said Anderson. Again, we need to back up from there; we need a regional decision on this item some time in June, an IT decision by May, and SCT resolution by April -- it's more or less the same schedule as we set for Issue 4. Time is obviously of the essence, said Ruff. We've set up a Bonneville subcommittee to deal with this issue, and it's time for a meeting. After a few minutes' discussion, the SCT agreed to schedule a Bonneville subcommittee meeting for Friday, February 21.

What about the Bonneville surface collector test? asked Hevlin -- that's another extremely time-sensitive project that should be on this list. The contract to build the prototype is being advertised in April, which means this is the most urgent issue we're dealing with. We have to either resolve that issue, or elevate it to IT, at the March SCT meeting, so it will need to be thoroughly vetted at the Bonneville subcommittee meeting, Hevlin said.

ISSUE 7: Turbine Passage Survival Study Program.

As there are no immediately time-critical elements to this item, it received no substantive discussion at the meeting.

ISSUE 8: Separator Evaluation.

The FY'98 funds for this item ($2 million) will go for construction and testing, said Mason. The critical date for the separator evaluation decision, again, is July, said Anderson. Again, we need to back up from there; we need a regional decision on this item some time in June, an IT decision by May, and SCT resolution by April -- it's more or less the same schedule as we set for Issues 4 and 6. Heinith again agreed to develop the opposition paper for this item; COE agreed to develop a paper in support, for discussion at the March SCT meeting.

V. Bonneville Dam Multi-Year Workplan Update.

This issue was covered in the previous agenda item, and will be developed further at the Bonneville subcommittee meeting on February 21.

VI. SCT's Role in Coordination with O&M Subcommittees.

At the last Executive Committee meeting, SCT was given the charge of overseeing the Corps' O&M funding for fish facilities, said Ruff. Is that something this group really wants to take on?

We have a proposal about how to make that work, said Anderson. My understanding of what actually came out of the Executive Committee is that SCT is being asked to oversee the portion of the Corps' O&M costs that go to dam passage, including transport, under the MOA reimbursable category. We are not being asked to deal with resident fish, wildlife or hatchery projects.

So here's our proposal, Anderson said. We'll bring a listing, including cost estimates, of dam passage and transportation line-

items for the FY'98 budget to the Fish Passage O&M group's March meeting. Most of those are routine, year-in, year-out items. There are also some other projects we feel are necessary -- non-routine or deferrable items that result from capital investments we've made. The idea is to allow everyone to see what those dollars are going to be under the President's FY'98 budget. FPOM will then be able to discuss what the dollars are for, and what the priorities should be, using a similar ranking system to the one we've used at SCT. Any unresolved issues from that process would then be elevated to SCT; FPOM could also brief this group on their overall package.

Basically, if the SCT wants to provide input on the O&M budget before the Corps sends it back to Washington, this is the opportunity to do so, Anderson said. After some minutes of further discussion, Anderson's proposed strategy for an SCT/FPOM interface received general SCT approval.

It was further agreed that the Corps will provide a breakout of the FY'98 O&M budget, as well as the estimated FY'99 O&M budget, at the March SCT meeting.

VII. Updates.

a. Ice Harbor and John Day Flow Deflectors.

COE's Teri Barila reported that four flip-lips have been installed to date at Ice Harbor; the contractor was washed out by high flows around Christmas, and will require a minimum of four weeks of zero spill to be able to complete spill bays 3 and 8, both of which have been partially excavated. He was directed to proceed with construction of new bulkheads; however, the probability of four weeks with no spill at this point in the season is effectively nil, and the consensus at the meeting was that no further work will be done on the project this spring. Bays 3 and 8 will be non-operational this spring.

At John Day, the contractor is in the field; he has forming in place for the pier extensions to the bulkheads, reported John Kranda. We're still looking at getting three or four bays installed by this spring; construction on the remaining bays will resume this fall.

b. Ice Harbor Unit 5.

No update was presented on this item at the meeting.

c. John Day Drawdown Study.

The justification letter has not gone over to the committees yet, but that should happen within a week, Anderson said. What the committee will do once it's in their hands, I don't know.

d. CRFMP FY'98 Budget.

Anderson provided a brief update on the just-released FY'98 budget: it's $127 million, he said.

e. AFEP and FFDRWG.

Barila provided the following updates from the most recent AFEP meeting:

-- Lower Granite Outfall Site: a package will be put together by the end of the fiscal year, including the modeling work at WES and the engineering requirements.

-- Lower Granite Dewatering Structure: Concerns were raised about the new design system, because it would be an untested new design, and because Lower Granite may not be the most appropriate site. Support was voiced for the innovative design, and the potential for improved operational reliability. There was general agreement that further hydraulic and mechanical evaluation of the concept should proceed.

-- Separator Evaluation: an [inaudible] was distributed, with comments requested by February 18. The prototype test is scheduled for 1998, for both a high-velocity design and modular components improvements to existing systems. Ice Harbor was the recommended site.

-- Prototype DGAS Structures: an update was presented on the raised tailrace with deflectors prototype test recommended for Ice Harbor; construction is scheduled to begin in August 1998, with evaluation in spring 1999.

-- 1997 Monitoring Plan: discussion centered around the configurations and the logic for the Corps' configuration.

John Ferguson reported that no Fish Facilities Design Review Work Group meeting has taken place since the last SCT meeting; the next FFDRWG meeting is scheduled for February 26. Per the request at the January SCT meeting, we did convene a conference call on the Lower Columbia River adult radio telemetry study, he said; we listened to Bob's proposal for increased monitoring through the spawning grounds, but ultimately, nothing in the

study design was changed.

We're still looking for funding for the adult study, Ferguson continued; we need more money to look at chinook through the spawning grounds. We're going to cover sockeye; the question is chinook. We've been scouring our budget, and the word, as of today, is that we can probably do quite a bit of the chinook monitoring to the spawning grounds with our existing O&M funds. In other words, things look better than they did during the conference call, and we should be able to look at chinook through the spawning grounds to at least a limited degree. The issue is whether or not the BPA money is going to arrive -- if that comes in, he said, that will give us some contingency funds, which will allow us to start purchasing 1999 tags.

Moving on, Ferguson said the Studies Review Work Group meeting covering FY'98 studies is set for February 24 and 25 in Portland; the one-page research summaries are out now. The purpose of this two-day workshop is to give everyone a chance to see, very early in the process, what we believe is needed in terms of 1998 studies.

One final item, he said: the 1997 Bonneville PH1 surface collection test. At our January meeting, we cancelled everything. However, when we got comments back on the Fish Passage Plan, there seemed to still be some interest in this project. So we're getting mixed signals, Ferguson said. Do we want to revisit this issue, while there's still time to do the test this summer? After some minutes of discussion, it was agreed to add this item to the February 21 Bonneville subcommittee agenda.

f. Independent Review of the Implementation Process.

As most of you are aware, said Anderson, the last two years' appropriations contained language directing the Corps to conduct an independent review of how we design, test and implement fish passage facility improvements -- how can we do these things cheaper, faster and better. Based on that appropriations language, COE has been working this over; we developed a basic scope for the work, got a budget for the work through IT, and selected a contractor -- SAIC. We now have a final workplan from SAIC, describing exactly how they intend to conduct this review, Anderson said. In essence, they plan to interview all relevant parties in the region, to try to figure out where the problems lie and how the process might be improved. The cost for the review will be about $370,000.

VIII. Proposal for a Drawdown Committee.

CRITFC is proposing the formation of a drawdown oversight committee, consisting of biologists and engineers, said Heinith. It seems to me that this is something that's needed, to provide a central core to the region's deliberations on the drawdown alternative, said Hevlin. The Corps would be willing to entertain any ideas or thoughts along these lines, said Anderson -- it's something that needs more coordination. To the extent that we could get one-stop shopping, that would be great -- after all, we now have a committee looking at the economic side of drawdown, so maybe this makes sense.

IX. Other Items.

The group spent a few minutes discussing CRITFC's list of possible FY'97 reprogramming issues; in particular, the potential to reprogram funding for adult fallback projects. Hevlin suggested that the Corps provide comments on CRITFC's list, with an eye toward what is or is not feasible to do in 1997, by March 3. We'll then fax those comments out to everyone in SCT, said Hevlin, and we can discuss them at the March 10 SCT meeting.

X. Next SCT Meeting and Agenda Items.

The next SCT meeting was set for Monday, March 10 from 9 a.m. to 4 p.m. at NMFS's Portland offices. The April SCT meeting was set for Monday, April 21. Meeting notes prepared by Jeff Kuechle, BPA contractor.